While AI is still in its infancy, its marketing has reached maturity. In general, AI concerns understanding and learning the phenomena of human intelligence and to design computer systems that can imitate human behavioural patterns and create knowledge relevant to problem-solving (Min, 2010). As a result, the field of AI, Robotics and Machine learning are becoming increasingly pertinent, topical and relevant discussions from within social, academic and industrial settings. As a direct consequence of AI, it is reported the UK GDP will increase by 10.3% in 2030, equivalent to £232bn (PricewaterhouseCooper, 2017), thus making AI not only one of the biggest commercial opportunities in today’s fast-changing economy, but also a pertinent and timely topic for academic research. This 10.3% anticipated growth in GDP is largely projected through improved product quality (4.5%), more personalized goods and greater variety of goods (3.7%) resulting from AI, as well as increased productivity through augmentation of the labour force and automation of some roles (1.9%). As a result, the proliferation of AI can be seen as positively influencing the economic outlook for the UK in the foreseeable future.

The explosive rise in technologies has revolutionised the way in which business operate, consumers buy, and the pace at which these activities take place. These advancements continue to have profound impact on business processes across the entire organisation. As such, Logistics and Supply Chain Management (LSCM) are also leveraging benefits from digitisation, allowing organisations to increase efficiency and productivity, whilst also providing greater transparency and accuracy in the movement of goods. While the warehouse is a key component within LSCM, warehousing research remains an understudied area within overall supply chain research, accounting for only a fraction of the overall research within this field. However, of the extant warehouse research, attention has largely been placed on warehouse design, performance and technology use, yet overlooking the determinants of Artificial Intelligence (AI) adoption within warehouses. Accordingly, through proposing an

extension of the Technology–Organisation–Environment (TOE) framework, this research explores the barriers and opportunities of AI within the warehouse of a major retailer. The findings for this qualitative study reveal AI challenges resulting from a shortage of both skill and mind-set of operational management, while also uncovering the opportunities presented through existing IT infrastructure and pre-existing AI exposure of management.